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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,709	01/29/2001	Jano Hajto	808P22231B	4281

7590 08 22 2003

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[REDACTED] EXAMINER

PATEL, ASHOK

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2879

DATE MAILED: 08 22 2003

Please find below and/or attached an Office communication concerning this application or proceeding.



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09/744,709	01/29/2001	Jano Hajto	808P22231B	4281

7590 07/21/2003

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[REDACTED] EXAMINER

PATEL, ASHOK

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RE - 21A2T

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<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/744,709	HAJTO ET AL. <i>[Signature]</i>
	Examiner Ashok Patel	Art Unit 2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-16 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-16 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 January 2002 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
 

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>8</u> . | 6) <input type="checkbox"/> Other: _____                                    |

1. Claims 1-4 and 5-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The scope of claims 1-6 cannot be ascertained from the preamble "use". It cannot be realized as to what the claim structure encompasses. Is it a doped polymer or an optical fiber or a film or a sheet or a display? An appropriate statutory class cannot be established for claims 1-6.

As to claim 5, it remains unclear as to what the claimed display encompasses in its structure. Is it the display that is consisted of a plurality of fibers or is it the fluorescent dye that is consisted of the plurality of fibers in the claim?

All other dependent claims are rejected by way of their dependency of rejected claims 1 and/or 5.

2. Claims 1-4 and 5-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-16 are also rejected for reasons set forth in previous paragraph since it renders scope of the claims indefinite.

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As to claim 4, it remains unclear as to what "L" and "r" stand for in the within the claim.

As to claims 11, 13, 15 and 16: these claims include terms that lack antecedent basis. These terms are "the stack" in claims 13 ad 15; the term "the dielectric layers" in claim 15.

As to claim 16, the term "and/or" renders the claim vague and indefinite since it remains unclear as to what the claim refers to. Does the claim refer to "and" or "or".

Dependent claims are necessarily rejected due to their dependencies on rejected parent claims.

3. Since scope of claims 1-4 and 5-16 cannot be ascertained, the Examiner will attempt to issue an action merit as best as possible in terms of prior art rejection.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 5, 6, 10-12, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Naum (U.S. Patent 5,579,429, of record).

Naum discloses applicant's claimed display device (Figs. 1, 4, 6, 7, 8, 19, claim 1 etc.) including a doped polymer fluorescent dye (Figure 22, col. 5, lines 65-col. 6, line 4) including a plurality of fibers (30) which emits color of the dye when excited by light, characterized in that the polymer is doped with a combination of dyes (as shown in Figure 22 and col. 7, line 27 to col. 61; col. 15, lines 27-32) as claimed by applicant in claim 6; the transparent polymer being of material as claimed by applicant in claim 2, (see col. 6, last two paragraphs); the plurality of fluorescent fibers also acting as pixels, as in Figure 20 as recited in applicants' claim 10; bottom surfaces and edges of the polymer film being covered with a highly reflective layer (96, 100, 98 etc.) which inherently acts as a mirror, as recited in applicant's claim 11; top (outer) surface of the polymer being covered with a dielectric polymer film (70, 100, 98 etc.) as recited in applicant's claim 12.

As to claims 15 and 16, Naum discloses outer layers (98, 100, 96) of inherently different refractive indices (since they are not the same layers) for substantially 100% reflection of light wavelengths emitted from the fluorescent dyes.

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Further, process steps recited in claims 15 and 16 render them of product-by-process nature. The process steps are not given patentable weight. It is well settled that a claimed device cannot be distinguished over the prior art by a process limitation. The subject product-by-process recitation is not afforded patentable weight (MPEP 2113).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 3, 4, 13, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naum as applied above to in claims 1 and 5.

As to claims 3 and 4, although Naum does not specifically disclose the polymer with applicant's claimed dimensions

(radius, cross-sectional area length etc.), such typical dimensions are typical and therefore would have been obvious to one of ordinary skilled in the polymer fiber display device art.

As to claims 13 and 14, although Naum does not disclose the display device including a stack of alternating sequence of two dielectric films with alternating high and low refractive index, providing such configuration of outer layers would have been obvious to one of ordinary skill in the art for optimizing transmission of the light from the device. Naum would have therefore suggested to one of ordinary skill in the art to use such alternating outer layers to achieve the stated purpose.

8. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naum as applied above to in claims 1 and 5 in view of Jin et al (U.S. Patent 6,124,046).

Naum discloses the polymer doped with Coumarin 6. However Naum does not disclose the polymer further doped with Nile Red, use of Nile Red along with Coumarin 6 is well known as fluorescent agents in the display device art for doping the fluorescent polymer. Such fluorescent dyes are well known suitable alternatives within the display device. Jin et al is however cited for showing the use of applicant's claimed Nile Red along and Coumarin 6 as fluorescent dyes in the display

device (Col. 6 last paragraph to col. 7, first paragraph). Consequently, it would have been obvious to one of ordinary skill in the art to provide Naum's display device with Nile Red along with Coumarin 6 fluorescent dyes as known suitable alternatives.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mori et al is cited for showing a general structure of a display device using Nile Red and Coumarin 6.

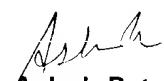
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok Patel whose telephone number is 703-305-4934. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 703-305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7382 for regular communications and 703-308-7382 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.



Ashok Patel  
Primary Examiner  
Art Unit 2879